



Report from Miami

How to succeed in the sixties was the theme of the 1960 National Conference of the S.P.I. Some 250 industry executives came to find the answers. Here, in brief, are the guideposts they developed

Held at the Americana Hotel, Miami, Fla., May 11, 12, 13, the 1960 National Conference of S.P.I. was keyed to "Succeeding in the 60's." By almost any standard one may care to choose, it has to be regarded an unqualified success.

In the decade just beginning, population growth, family formation, money for discretionary spending will almost inevitably increase at an ever accelerating rate. How are the plastics industries to so organize themselves and govern themselves in order to be of maximum utility in the 60's, and how are they to assure themselves of adequate profit from their useful efforts? These were some of the questions to which the conference addressed itself during its three-day session.

The Conference, attended by some 250 plastics industry executives, many accompanied by their wives, was largely divided into concurrent sessions with most papers repeated twice, so that all delegates could arrange to hear everything. The pattern of presentation was that of the "workshop," wherein small groupings made for closer attention and more questions from the floor. Luncheon and afternoon sessions were single, where all interested could attend, and three of the sessions were conducted in the form of panels. These were most productive of interesting comment.

MARKETS AND MONEY

Chairman for the morning sessions of Wednesday, May 11, were V. A. Garlington, E. I. du Pont de Nemours & Co. Inc. and C. F. Trombley, Monsanto Chemical Co.

D. L. Salinger, Director, Industrial Div., Walter E. Heller & Co., discussed the management of company finances, factoring techniques, and leasing to overcome working capital problems. He illustrated, with case histories, instances where new machinery could be acquired, receivables discounted to advantage, and ready money kept flowing through the veins of an enterprise by the use of comprehensive and sophisticated modern financing methods, obviating the necessity of mortgaging fixed assets and borrowing call money at high rates of interest. Mr. Salinger stressed that the management of corporate

money, whether owned or borrowed, is becoming a new science and a new profession, whose full understanding is becoming more and more essential.

MORE PLASTICS IN CARS

In the past few years the plastics industry has made great strides in automobile applications and a further three-fold increase in use in this decade is anticipated, according to William P. Gobeille, manager of the plastics operation of American Motors Corp.

The average 1960 automobile has a total of 20 lb. of plastics, compared with 11 lb. only six years ago but, "I believe that we will reach 60 lb. per average car by the end of the 1960's," Mr. Gobeille stated. "These weights do not include plastics used in conjunction with other materials, such as vinyl upholstery, floor mats, paint and laminated safety glass," he stated. "Those items alone contain about 30 lb. of plastics resins."

While steel prices have been steadily rising, the price of plastics has been decreasing, while at the same time, physical properties of plastics have been greatly improved to the point where they can be molded or formed to exact shapes with little or no waste. Recent plastics applications in automobiles include seat side shields, defroster and heater tubes and ducts, glove compartments, headliners, foam seat pads, padded instrument panels, and others.

"Possible uses in the future," Mr. Gobeille said, "include hoods, wheel disks, fan blades, fuel tanks, interior window moldings, entire seats, and a host of others." He further stated that American Motors' expenditures for plastic research and development had quadrupled in the last two years, indicating that future Rambler models will feature many new plastics applications.

While the plastics industry has made great progress in the last few years in this country, it is generally agreed that the Europeans are about two years ahead of us in the use of thermoplastics for automobiles. One foreign car, according to Mr. Gobeille, uses 12 lb. of plastic parts to replace 84 lb. of metal parts, thereby improving the car's performance and operating economy because of the weight reduction.

The speaker stressed the importance of the plastics

industries emphasizing to the public and to the automotive industries, the suitability of plastics for heavy-duty tasks.

PLASTICS IN APPLIANCES

Emphasizing chiefly the application of plastics to refrigerators, Leland K. Warrick, Mgr., Advance Development Refrigeration Engineering, Hotpoint Co., explored the outlook for future volume in that field.

Households will increase from 47.8 million to 66.5 million between now and 1975; families will increase from 41.9 million to 55.5 million in the same period; married couples will increase from 37.6 million to 50.4 million. It is significant that household formation will be faster than family, reflecting the increasing number of single persons with private dwelling units. This, of course, means an increase in kitchens where home appliances are of primary interest. The 1960 sales of refrigerators are predicted at 3,800,000; 1970 sales are predicted at 46% above that. In the same time freezer sales should increase by 20% and air-conditioning sales by 92% over 1960 estimates. In refrigerators, if there were to be no change in design or materials use, consumption of plastics would rise in this 10-year period from 49.4 million lb. to 70.2 million lb.; but, if refrigerator interior liners are to be made of plastics and plastics foam insulations are to be used, 1970 consumption in the field would be 205.2 million pounds.

Mr. Warrick stressed that quality control from pellet to engineered part, proper design of parts for plastics, and public relations on the part of the industry to improve the housewife's attitude toward plastics are of importance in realizing this market.

The speaker outlined the plastics markets in dish washers, garbage disposers, hot water heaters, clothes washers and driers, ranges, refrigerators, and freezers. He presented 15 service complaints which could be traced to misapplication, specification of wrong materials, poor design and engineering, and poor quality control. Appliance manufacturers and their technical specialists like plastics. If quality of plastics parts improves and public opinion on plastics in appliances improves, the above mentioned market can be obtained.

BUILDING BREAKTHROUGH

Albert G. H. Dietz, Professor of Building Engineering, Massachusetts Institute of Technology, presented a most exciting picture of the possibilities for major invasion of the building industry by plastics in the next decade. While present volume of all construction is \$50 billion a year, of which housing constitutes \$20 billion and plastics' share in that market amounts to only 1 or 2%, the volume can be easily doubled by putting plastics in significant parts of the shell equipment to augment the markets now enjoyed in flooring, adhesives, wall covering, laminates, and electrical uses.

Since few plastics have long histories of exposure, the industry must find ways of correlating accelerated tests with long-time behavior tests to assure architects and builders of complete durability. Here

product standards must augment material standards. This is particularly true of sandwich building panels, piping, and form of attachment.

After the product and its accessory fitment has been properly engineered and manufactured, comes the matter of distribution and availability of the units to the vast and diffuse building industry. Here there will be some advantage in the trend away from small builders to big tract development firms.

Prof. Dietz emphasized that building codes must be revised for the incorporation of satisfactory plastics in buildings, and that this is a responsibility of the plastics industry. Above the building code authorities, a large-scale mutual education effort is needed to familiarize the building industry concerning plastics, and this effort must be sustained right through to the public.

The speaker presented major trends in building, which mitigate on behalf of plastics: a) shop fabrication of major elements such as panels; b) mechanical, electrical, and sanitary equipment will absorb more than the present 50% of the total cost of building and plastics can be used in many of these items; c) flexibility of space requires ready-moved units made of light-weight but durable materials; d) acoustical and thermal insulation offers big opportunities for plastics foams, particularly in structural sandwiches; and e) all plastics must compete in in-place cost with other materials.

MERGERS AND ACQUISITIONS

The Chairman of the May 11 luncheon was R. L. Davidson of Kurz-Kasch Inc.

Hiram McCann, Editor, MODERN PLASTICS Magazine, spoke on major trends in industry integration, horizontal and vertical, and discussed modern techniques for acquisition organization.

Mr. McCann pointed out that we are presently in the third of three great merger eras. From 1900 to 1920 was the era of formation of the gigantic monopolistic trusts. This period ended with the trust-busters, who brought free competition again into play. The second era, from 1920 to 1930, was a period of banker-motivated amalgamations and was mainly for the purpose of inflating and controlling stock prices. This ended when the Securities Exchange Commission was established. After the depression and the war, the third merger era, beginning in 1947, was the direct result of new power given to operating management and was oriented to expansion, diversification and profit specialization. In the early days of this third period, the excess profits tax of 80% caused mergers designed only to produce tax losses; but since 1954 when the new Internal Revenue code was written and the corporate income tax of 52% was established, tax loss is the least invalid reason for a merger. Nevertheless, the tax significance of all amalgamation and diversification progress is great.

The speaker opined that there will be more acquisitions of plastics processing companies and materials companies by paper companies, metal companies, glass companies, building materials companies,

whose present products are challenged by plastics. There will be more integration of big and automatic processing with material making facilities. There will be even more mergers between custom and proprietary processors to give strength to this segment of the industry.

Pointing out some basic rules in modern merger technology, Mr. McCann said that some companies are just not big enough to be integrated, so must merge with others to make a big enough and attractive enough package for such a deal. More rapid obsolescence of equipment and methods, more need for executive and engineering personnel, and more need for working capital will accelerate the trend. Finally, the speaker briefly touched on the international aspect of this whole picture, predicting corporate marriages between plastics processors in different countries to the end that know-how may be utilized around the world.

WHITHER CUSTOM MOLDERS?

Moderated by Donald F. Dew, Diemolding Corp., a strong panel discussed "Custom Versus Captive Molding—What is Profitability and Future" on the afternoon of May 11. Panel members were: William P. Gobeille; Arthur S. Hyde, A. L. Hyde Co.; Miller G. Sherwood, Michigan Plastic Products Inc.; Stanford H. Shaw, Shaw Insulator Co.; A. J. de Matteo, machinery consultant; William H. Monteith, Akromold Inc.; Bailey H. Barnes, E. I. du Pont de Nemours & Co. Inc.

A major point was established by Arthur Hyde and Stanford Shaw on the difference between blueprint molding jobs and creative engineering. Custom molders have been deluded into giving away know-how for free because the difference between the two types of jobs, in quotation, has not been defined. The captive shop can run forever, economically, on the continuous simple reproductive process. The custom molder contributes to a complex job design and engineering not otherwise obtainable—and for this he must be paid. There was some discussion of the costing systems used in captive and custom plants, but neither type of plant will accept the costing system of the other type. Overhead burdens, direct and indirect labor costs, even space rent, are involved. The main conclusion reached by audience members interviewed was that the custom molders must somehow find a way to get paid for their specialized knowledge and abilities applied to a job, over and above the physical production of that job.

NEW AND EXPANDING MARKETS

Chairmen for the two morning sessions on May 12 were C. W. Cleworth, Cleworth Publishing Co. Inc. and C. J. Groos, Boonton Molding Co.

The future of blow molding in the plastics industry was discussed by Vernon Hill of the Auto-Blow Corp. Mr. Hill's writings have appeared in MODERN PLASTICS Magazine, and he has been reported therein recently. His views, in general, agree with the articles in the November and December 1959 issues of

MODERN PLASTICS. Mr. Hill's extensive knowledge of blow molding technology, equipment, and market possibilities were clearly shown in his presentation.

PLASTICS IN ELECTRONICS

Ralph L. Mondano of Raytheon Mfg. Co. pointed out the relationship between dollars and pounds in the exotic field of electronics in radomes, potted transformers and electronic circuitry, printed circuitry, dielectric sheet, radar load materials, and large reinforced plastics housings. "Conservatively," he stated, "this work represented \$250 million in 1959, but in some cases a pound of finished product may cost as much as \$500."

Discussing, especially, reinforced plastics as ablative materials for missile use, he showed how these new combinations of fibers and resins and fillers can produce high-strength materials capable of withstanding temperatures up to 10,000° F. for the short periods of time required by the projects concerned. Finally, Mr. Mondano stated clearly that only 25 or 30% of the plastics' potential for the electronics industry has yet been reached. A major problem is sufficient well-trained and enthusiastic personnel.

HOW TO PAY SALESMEN

Anthony J. De Bernardi, Plastics Engineering Sales Co., spoke on "Effective Compensation of Salesmen." The speaker discussed salary, salary plus commission, straight commission against drawing account, period bonus, and spot bonus for sales production. The balance between security and incentive is most important, and there are no simple rules for effective compensation of salesmen.

EFFECTIVE MARKETING

Dr. Edward J. Fox, Chairman, Department of Marketing, Business School, University of Miami, gave one of the most significant papers presented before the plastics industry in many years. Dr. Fox's presentation dealt with the broad aspects of marketing, including broad significance, company and product "image," and industry appreciation on the part of the public. The use of surveys, the motivation approach to markets, public relations activities, and localized market promotion were discussed. Validity of design and quality of product will not alone sell in today's competitive markets. Indeed, many people make purchase decisions on the basis of the kind of company with which they are doing business.

DECADE OF IDEAS

Chairman of the May 12 luncheon was R. C. Weigel, President of The Society of the Plastics Industry Inc. and General Manager, Polychemicals Dept.—E. I. du Pont de Nemours & Company Inc.

The speaker, Dr. David H. Dawson, Vice-President, E. I. du Pont de Nemours & Co. Inc., taking as his subject "The Competitive 60's," pointed out that we are competing not only in materials and products

but in the market of world opinion. Our responsibilities do not cease when we have manufactured, sold and delivered a quota of goods. We must be alert to all attempts to weaken our dynamic, competitive industrial system. And when this system is threatened by injudicious legislation, we must be willing to oppose it by all legitimate means. Business is controlled by law and laws are made by government; so every businessman must be vitally interested in politics.

The 60's will be competitive in the plastics business in four major areas. First, there will be a shortage of manpower in the creative age group between 25 and 44 years, and there will be talent hunts bigger than we have seen to date. Second, there will be a battle between plastics and other materials of engineering and construction, such as aluminum, steel, etc. Third, there will be competition between the different plastics themselves. Fourth, there will be competition from abroad where modern facilities are providing economies that we must study. Dr. Dawson suggested that the plastics industries take the long view in selling on the basis of performance and economics, that they develop sound financial structures, that they improve personnel practices and that, at processor level, they develop their own technical creativity, rather than depending on the material suppliers.

MACHINERY TRENDS

John H. Woodruff, Auburn Plastics Inc., was Chairman of the afternoon session of May 12.

A. J. de Matteo was moderator of a panel discussion on machinery developments and trends. The following men participated: Thomas G. Bishop, The Hydraulic Press Mfg. Co.; Quenton M. White, F. J. Stokes Corp.; William H. Willert, Frank W. Egan & Co.; Robert E. Kostur, Comet Industries; and Ned H. Porte, General American Transportation Corp. Automation of both injection and compression processes, the use of screw preplastication, recent developments in extrusion molding, in blow molding, and in sintering were discussed.

TOMORROW'S MOLDS

Moderated by William H. Monteith, the following men were a panel on the subject, "Mold Makers View the Future:" Jack G. High, Enduro Tool & Engineering Co. Inc.; Lionel B. Kavanagh, Standard Tool Co.; George Beck, Columbia Engineering Co. Inc.; and R. L. Davidson.

As has been emphasized by every expert again and again, the better the mold, the better the product, the fewer the rejects and the lower the overall cost of the part. All recent mold-making developments, such as casting methods and metal combinations, were discussed.

CAPE CANAVERAL

Thanks to prodigious efforts on the part of S.P.I. staff, some 150 persons were invited to fly up to Patrick Air Force Base and to tour Cape Canaveral.

To all present it was a thrilling eye-opener. The huge missile complexes at this research and development establishment almost defy description. Up on a gantry visitors walked all around the Atlas being assembled, saw a ship motion simulator designed to test out Polaris missiles, 16 of which will be armament on our new nuclear submarines, and were briefed on down-range missile safety operations between the Cape and Ascension Island, 5500 miles away. Final unannounced thrill of a lifetime, reminding most men of their first childhood observation of fireworks, was the viewing of an actual Titan shot. At count-down, for a piece of a second, silence. Then the 95 ft. missile, taller than an 8-story building, rose straight in the sky with a tail of flame twice as long as itself. A spark in the sky was visible for seconds while it rose 30 miles before assuming trajectory on target. Titan flew 5500 miles in 20-odd min. and landed within 10 ft. of its target.

NEW S.P.I. OFFICERS

The following four officers have another year in term of office: Director and Chairman of the Board, C. Russell Mahaney, Panelyte Div., St. Regis Paper Co.; Director and President, R. C. Weigel, Polychemicals Dept., E. I. du Pont de Nemours & Co. Inc.; Director and Vice President, R. L. Davidson, Kurz-Kasch Inc.; Director and Secretary-Treasurer, E. J. Caughlin, American Insulator Corp.

At the annual business meeting, held on May 12, the following slate was elected:

Sectional Directors: Canadian Section, Ralph F. Harrison, Canadian General Electric Co.; Midwest Section, Donald E. Goll, Black Hawk Molding Co.; New England Section, John W. LaBelle, Foster Grant Co. Inc.; Western Section, James H. Watt, Monsanto Chemical Co.

Industry Division and Committee Directors: Cellular Plastics Division, Samuel Steingiser, Mobay Chemical Co.; Code Advisory Committee, Frank X. Ambrose, Alsynite Co. of America; Epoxy Resin Formulators Division, Donald Roon, Hysol Corp.; Fluorocarbons Division, Edgar S. Peleris, Resistoflex Corp.; Housewares Division, Douglas L. Jocelyn, Flastry Corp.; Machinery Division, William H. Bennett, The Hydraulic Press Mfg. Co.; Mold Makers Division, W. H. Monteith, Akromold Inc.; Profile Extruders Division, Milton J. Lax, Kreidel Plastics Inc.; Reinforced Division, Samuel A. Moore, Interchemical Corp.; Thermoplastics Pipe Division, George H. Reed, American Hard Rubber Co., Div. Amerace Corp.; Vinyl Film Division, James W. McLaughlin, Union Carbide Plastics Co., Div. Union Carbide Corp.

Directors at large: Ralph T. Brotz, Plastics Engineering Co.; Louis J. Francisco, American Cyanamid Co.; Harry M. Jenkins, General American Transportation Corp.; W. F. Oelman, Standard Molding Corp.; J. D. Proctor, Celluplastic Corp.; Owen E. Skelton, Modern Plastics Corp.; Jay G. Somers, Consoweld Corp.; George Wash, Phillips Chemical Co.; C. C. Whitacre, Midwest Plastic Products Co.; R. B. White, The Glastic Corp. — End

